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5 FM-CW RADAR SYSTEM

CROSS-REFERENCE TO RELATED APPLICATION(S)

10 This application is a divisional of U.S. Application No. 10/148,059, filed May 24, 2002, which is the National Stage of International Patent Application No. PCT/JP01/08397, filed September 26, 2001, which in turn claims priority of Japanese Patent Application No. 2000-292730, filed on September 26, 2000.

TECHNICAL FIELD

15 The present invention relates to an FM-CW radar system and, more particularly, to a system equipped with a means for discriminating a signal related to a target object from noise and a signal from a very distant target in order not to erroneously detect noise, a very distant target, or the like, as a target object.

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BACKGROUND ART

25 FM-CW radar is used as a radar system for measuring the distance and the relative velocity of a target object. As FM-CW radar can measure the distance and the relative velocity of a vehicle traveling in front by using a simple signal processing circuit, and as its transmitter and receiver can be constructed with simple circuitry, this type of radar is used as an automotive collision avoidance radar.

30 The principle of FM-CW radar is as follows. An oscillator is frequency-modulated, for example, by a triangular wave of several hundred hertz, and the frequency-modulated wave is transmitted; then, a reflected signal from a target object is received, and the received signal is frequency-demodulated

35 using the frequency-modulated wave as the local frequency.